REMARKS

Formal Matters

Claims 1-15 are all the claims pending in the Application. Claims 1-15 are rejected. Claims 4 and 5 are amended.

Applicant thanks the Examiner for initialing the Information Disclosure Statement (IDS) submitted on December 3, 2007.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-15 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Torborg et al. ("Torborg"). Applicant traverses this rejection for at least the following reasons.

Claims 1, 7, and 8

Claim 1 requires, inter alia, the following:

> display image generating means for generating display image data to be displayed on a screen based on information on at least one three-dimensional object disposed in a three-dimensional space and information on a viewpoint position;
>
> image area identification data storage means for storing image area identification data that, of said display image data, specifically identifies an image area corresponding to said three-dimensional object; and

(emphasis added.)

Regarding the claimed "image area identification data," the Examiner contends that the triangles created for the rendering of various primitives by Polygon Object Processor of Torborg, after being rendered, teach this requirement of claim 1. The Examiner states that "[a] triangle in 3D space rendered on a display is still a triangle, and it occupies an area determined by image space coordinates." We would respectfully disagree with the Examiner's position.

The above-quoted portion of claim 1, states that the "image area identification data . . . specifically identifies an image area corresponding to said three-dimensional object." Further, the identified "image area" is described as being "of said display image data," which is further described as "image data to be displayed on a screen." Thus, the "image area identification data" must specifically identify an image area to be displayed on a screen, the image area corresponding to the claimed three-dimensional object.

In contrast to claim 1, the portion of Torborg cited by the Examiner only describes the standard rendering of triangles making up three-dimensional objects. Such triangles are not rendered so as to "specifically identify" the image area corresponding to the rendered triangle; rather, all triangles making up objects in a scene are rendered to the same view or canvas. Thus, it is generally not possible to identify any particular "image area corresponding to [a] three-dimensional object" from the resulting rendered image. In other words, since many three-dimensional objects are rendered together according to the description of Torborg, the resulting rendered scene cannot be said to "specifically identify" any one three-dimensional object. Indeed, Torborg does not teach or suggest how the rendered triangles could "specifically identify" the image area claimed.

Furthermore, the triangles of Torborg cited by the Examiner are only a portion of any three-dimensional image, as Torborg states that the triangles are created for the rendering of various primitives. In contrast, claim 1 requires that the image area identification data specifically identify an "image area corresponding to said three-dimensional object." Clearly, the process of Torborg is to transform polygons making up three-dimensional objects into triangles, and then to render the triangles. Accordingly, such rendered triangles can not "specifically identify" the image area corresponding to a three-dimensional object, as all objects are apparently rendered together for display.

Thus, Torborg fails to identically teach each and every element of claim 1 and, therefore, fails to anticipate claim 1. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 1.

Claims 7 and 8 recite features analogous to those of claim 1. These claims are, therefore, also patentable at least for the reasons set forth above with respect to claim 1. Accordingly, Applicant also respectfully requests that the Examiner withdraw the rejection of claims 7 and 8.

Claims 2, 14, and 15

Claim 2 requires, inter alia, the following:

> display image generating means for generating display image data to be displayed on a screen based on information on at least one three-dimensional object disposed in a three-dimensional space and information on a viewpoint position;
>
> elemental image generating means for generating elemental image data that represents at least one figure which represents an irregularity on an edge of said 3D object and is applied to a surface forming said three-dimensional object, and that draws at least one elemental image in an image area corresponding to said surface forming said three-dimensional object;
>
> synthesizing means for generating synthesized display image data to be displayed on said screen by synthesizing said generated elemental image data with the display image data generated based on said information on the three-dimensional object.

(emphasis added.)

The Examiner states that "[t]he figure which represents an irregularity on the edge of said 3D object is inherent in digital image processing which is discrete by its very nature." The Examiner appears to contend that irregularities on the surface of a 3D object itself, i.e., features of the polygons making up the 3D object, are sufficient to teach the above requirements of claim 2.

However, claim 2 clearly and separately recites "elemental image data" and "display image data." Claim 2 also states that the "display image data" is generated by the displayed image generating means based on information on at least one three-dimensional object, while the "elemental image data" is generated by the "elemental image generating means." Thus, it is the

display image data which appears to correspond to the image of the rendered 3D object of Torborg described by the Examiner; the elemental image data is generated by a separate component.

The distinctness of the elemental image data and the display image data is further clarified by the portion of claim 2 describing their synthesis. Claim 2 requires "synthesizing means" which synthesizes "said generated elemental image data with the display image data." Considering, as set forth above, that the elemental image data is separate and represents irregularities, there is no such synthesis of image data described in Torborg.

The Examiner merely argues that any 3-D object has inherent irregularities on its surface; however, this portion of claim 2 requires that the elemental image data, representing at least one figure which represents an irregularity, is synthesized with the display image data, both of which are image data. Thus, while it may be conceded that the display image data, generated based on a three-dimensional object, could have surface irregularities of its own, the introduction of elemental image data and its synthesis with the display image data are features completely absent from Torborg.

Thus, Torborg fails to identically teach each and every element of claim 2 and, therefore, fails to anticipate claim 2. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 2.

Claims 14 and 15 recite features similar to those of claim 2. These claims are, therefore, also patentable at least for reasons analogous to those set forth above with respect to claim 2. Accordingly, Applicant also respectfully requests that the Examiner withdraw the rejection of claims 14 and 15.

Claims 4 and 5

Claims 4 and 5 are amended to require "elemental image generating means for generating elemental image data that represents at least one figure which represents an irregularity on an edge of said 3D object." Claims 4 and 5 also recite further features similar to those of claim 2. These claims are, therefore, also patentable at least for reasons analogous to those set forth above with respect to claim 2. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 4 and 5.

Claim Rejections Under 35 U.S.C. § 101

Claims 8 and 15 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicant traverses this rejection for at least the following reasons.

The Examiner argues that the instant specification defines a "computer readable medium" so as to include a signal or a waveform, thereby rendering claims 8 and 15 non-statutory. However, the instant specification does not include signals or waveforms per se in its description of various examples of computer readable media.

The instant specification states the following:

> The storage portion 14 may include an external storage device for reading data or programs stored in a computer-readable storage medium, such as CD-ROM or DVD-ROM, in addition to a semiconductor storage device such as RAM (Random Access Memory). In addition, if a program is stored in a database provided for a server and the server delivers the program, the database provided for the server is also included in such an information storage medium as enumerated above.

(Specification at p. 9, lines 2-9 (emphasis added.)) As emphasized in the above quotation, the instant specification merely includes a database as one example of a computer readable medium. Although the example is one in which a program stored in the database is "delivered" from a server, it is merely a database which is offered as an example of a computer readable medium.

Thus, neither claim 8 nor claim 15 are directed to a "signal" or a "waveform," as such information carriers are not offered as examples of computer readable media to which the claims are directed. Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

This Application is being filed via the USPTO Electronic Filing System (EFS). Applicants herewith petition the Director of the USPTO to extend the time for reply to the above-identified Office Action for an appropriate length of time if necessary. Any fee due under 37 U.S.C. § 1.17(a) is being paid via the USPTO Electronic Filing System (EFS). The USPTO is also directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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